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SEXUAL MATURITY AND THE ONSET OF FLIGHT BEHAVIOR IN *MELIPONA FLAVOLINEATA* FRIESE MALES (APIDAE, MELIPONINI)

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In the societies of eusocial bees, the males have the sole function to fertilize reproductive females. Therefore, they need to outline a reproductive strategy that increases their chances of mating. Since this strategy should start when they are still in the safety of the nest, we aimed to test the effects of age and the experienced social context on the reproductive capacity of *Melipona flavolineata* males, a stingless bee. In confined conditions, 82 males were divided in two experimental groups. The first experiment tested the effects of age on the individual's sexual capability (n = 55). Males were accompanied during adulthood until certain age categories: 0, 5, 10, 15, 20 and 25 days. The other experiment tested the effects of social context; males (n = 27) were divided in three categories of social interactions in which the number of workers differed, during 15 days. The onset of flight behavior and sperm numbers in seminal vesicles were used to assess the reproductive capacity of males. After the flight ability of males was tested they were sacrificed, and their number of spermatozoa was estimated. The migration of sperm to seminal vesicles started at the age of five days. The sexual maturity was reached at 10 days, and flight ability, at 15 days. Inadequate social contexts, *i.e.* lack of social contact with workers, had no effect on maturity, but affected the flight behavior, causing a delay on its onset. Whereas males of this species remain in the nest for up to five days after becoming able for copulation, mature and capable of flying, we suggest *Melipona* males awaits in the nest until they reach their maximum reproductive performance, which may favor their survival and competition for females at the nuptial flights.

Keywords: age; social context; sperm numbers; reproductive capacity.

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